

## OUTREACH TO STUDENTS

### Community College Undergraduate Research Experience Summit



## Undergraduate Research Experiences Offer Great Opportunities for Community College Students

The American Association of Community Colleges (AACCC) convened the Community College Undergraduate Research Experience Summit on November 20 to 22, 2019, in Washington, D.C., with support from the National Science Foundation's Advanced Technological Education (ATE) program.

In collaboration with the Community College Undergraduate Research Initiative (CCURI) and the Council on Undergraduate Research (CUR), AACCC invited 120 thought leaders from community colleges, four-year colleges, business and industry, nonprofit organizations, and government agencies to the summit. Their discussions during the facilitated working groups led to recommendations for building, implementing, and sustaining undergraduate research experiences (UREs) at community colleges.

Recommendations for community college students are highlighted on the back. For the full report, executive summary, and specific recommendations for community college faculty, administrators, and partners, see [www.aacc.nche.edu/URESummit](http://www.aacc.nche.edu/URESummit).

### UREs Encourage Higher-level Learning

Undergraduate Research Experiences (UREs) come in an array of formats to fit the career aspirations and life responsibilities of community college students. The most accessible UREs are course-based undergraduate research experiences known as CUREs that weave examinations of real-world issues and pursuit of answers to authentic questions into a standard course curriculum. Students at the summit considered the CUREs they took as more interesting than their usual courses, and faculty at the summit described CUREs as instigators of higher-level learning.

Students and faculty at the summit agreed that participating in an academic team competition, completing an internship or apprenticeship, or tackling an independent study project takes more time than a typical in-person or online course. But, they say, the payoff for investing additional time and effort in UREs is an enriched college experience and the potential to inform one's career plans in transformational ways.

**"Participating in this research really opened me up to wanting to pursue more research."**

*Paula Kirya  
Pasadena City College Student*

### Definition of UREs

Undergraduate Research Experiences are activities that use the scientific method and/or the engineering design process to promote student learning by investigating a problem where the solution is unknown to students or faculty.

Examples of UREs currently offered by two-year colleges include:

- Course-based research
- Internships
- Independent studies
- Honors projects
- STEM design challenges from real-world scenarios
- Competitions that blend academic and technical skills
- Mentored research that is part of a larger project

# Community College Undergraduate Research Experience Summit Recommendations

## Skills that Employers Rate as Most Important:

- ✓ Written and oral communication skills
  - ✓ Teamwork skills
  - ✓ Ethical decision-making
  - ✓ Critical thinking
  - ✓ Ability to apply knowledge in real-world settings
- (Hart Research Associates, 2015)

## Teachers Report UREs Cultivate These Skills:

- ✓ Team building
  - ✓ Critical thinking
  - ✓ Problem solving
- (MATE Inspiration for Innovation, 2019)

## Students Report UREs Led to Gains in These Skills:

- ✓ Observation Skills
  - ✓ Analysis of statistical data
  - ✓ Time management
  - ✓ Computer skills
  - ✓ Report writing
  - ✓ Instrument calibration skills
  - ✓ Oral presentations
- (Mann & Wang, 2019)

## Tips for Students

Tapping into the power of UREs at most community colleges requires students to take the first step. Here are some ways to unlock the power of UREs:

- Select a course that has research experiences woven into it. These course-based research experiences are often listed as CURES in course catalogues.
- Ask faculty or guidance counselors about internships and apprenticeships, and complete applications for these opportunities.
- Participate in academic competitions that blend academic and technical skills.
- Form a team to compete in the NSF and AACC-sponsored Community College Innovation Challenge (CCIC).
- Enroll in an honors course that includes a research project.
- Take the initiative. If your college does not offer UREs ask the dean to add them or request independent study credit to explore a question with the guidance of a faculty mentor.

## Students Give UREs High Ratings for Informing Their Career Decisions

“Rate how much you agree or disagree with the following statements.” (n=536)

■ Strongly Disagree ■ Disagree ■ Agree ■ Strongly Agree

### Doing research confirmed my interest in my field of study.



### My research experience has prepared me for a job.



(Mann & Wang, 2019)

**“That was among the top greatest things that have ever happened in my life—just going to a community college and getting the opportunity to do undergraduate research.”**

Danial Nasr Azadani  
Del Mar College Graduate  
Texas A&M Graduate  
Entrepreneur

Hart Research Associates. (2015). *Falling Short? College Learning and Career Success: Selected Findings from Online Surveys of Employers and College Students Conducted on Behalf of the Association of American Colleges & Universities*. Washington, D.C. <https://www.aacu.org/sites/default/files/files/LEAP/2015Employerstudentsurvey.pdf>.

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